



Unit Plan

Pennsylvania's Agriculture

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Alignments:

Grade Levels

2nd Grade

Related Academic Standards

2.3.3.A Demonstrate an understanding of measurable characteristics and the need to quantify those characteristics.

2.4.3.B Interpret statements made with precise language of logic (e.g., all, or, every, none, some, or, many.)

2.4.4.A Use models, number facts, and properties to make conjectures, draw conclusions and explain reasons for conclusions.

2.4.4.B Recognize and use precise language to describe connections between mathematical ideas.

2.4.5.A Use models, number facts, properties and relationships to draw conclusions and explain reasons for conclusions.

2.4.5.B Use if...then statements to express conditional relationships.

Assessment Anchors

Eligible Content

Big Ideas

- Measures can be estimated by using known referents.
- Numerical quantities and calculations can be estimated by using numbers that are close to the actual values, but easier to compute.
- Patterns exhibit relationships that can be extended, described, and generalized.
- Some attributes of objects are measureable, e.g., length, mass, capacity, and can be quantified.
- The base-ten number system is a way to organize, represent, and compare numbers using groups of ten and place value.
- Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.

Concepts

- Classification of figures: Two- and three-dimensional figures
- Multiplication and division of whole numbers and the relationship between operations
- Perimeter: Units, tools, strategies to measure

Competencies

- Develop an understanding of multiplication and division of whole

Objectives

In this unit, students will understand the importance of agriculture to humans and the science behind agriculture. Students will:

- identify people's basic needs.
- know how people depend on agriculture.
- identify Pennsylvania's agriculture.
- know the similarities and differences of living things.
- identify how human actions affect environmental health.
- identify healthy ways to raise crops.
- identify types of pests and explain pest control.
- understand society's need for integrated pest management.

Essential Questions

Essential questions haven't been entered into the unit plan.

Related Unit and Lesson Plans

- [Agriculture's Role in Our Lives](#)
- [The Science Behind Agriculture](#)
- [Raising Crops in a Healthy Way](#)

Related Materials & Resources

The possible inclusion of commercial websites below is not an implied endorsement of their products, which are not free, and are not required for this unit.

- [Pennsylvania Agriculture Overview](#)
<http://www.agclassroom.org/kids/stats/pennsylvania.pdf>
- [Agriculture Overview in Spanish and English](#)
http://www.agclassroom.org/directory/pdf/spanish/day_without_ag.pdf

numbers by building on knowledge of the base ten system/operations and through the use of representations (e.g., equal-sized groups, arrays, area models, equal "jumps" on number lines, successive subtraction, partitioning, and sharing) in order to describe relationships, make estimations, and solve problems.

- Understand perimeter as a measurable attribute and select appropriate units, strategies, and tools to solve problems involving perimeter.

- Agriculture in the Classroom, USDA resource

<http://www.agclassroom.org>

Formative Assessment

[View](#)

1. Which list includes what most living things need in order to stay alive?

- A clothing, food, sugar, and cars
- B air, water, food, and shelter
- C water, shelter, vegetables, and shoes
- D shelter, pets, rain, and water

2. Which statement **best** describes a pest?

- A something that shows up where you don't want it
- B a layer of material that gardeners place over the soil
- C insects with two pairs of wings
- D organic leftovers such as rotted plant materials

3. What statement **best** describes Pest Management?

- A A rabbit eating out of the garden
- B A cockroach living in the classroom
- C Treating your dog for fleas
- D Allowing pests to live unharmed

4. Circle the products produced in Pennsylvania?

- pretzels pineapples
- corn apples
- wheat oranges

Answer Key:

1. B 2. A 3. C 4. pretzels, corn, wheat, apples

Short-Answer Items

Name _____

5. How does agriculture affect you? Write about how it affects you and why. Then draw a picture that

goes along with your writing.

Short-answer key and Scoring Rubrics:

5. Students will write about how agriculture affects them. They might write about the food they eat, the clothes they wear, the house they live in, or the toys they use. Students need to express how it affects them and why.

Points	Description
2	Student describes at least three ways agriculture affects him/her and why. Student draws a picture that represents his/her writing
1	Student describes ways agriculture affects him/her but is not able to describe why. Student draws a picture of some of the ways agriculture affects him/her.
0	Student does not describe ways agriculture affects him/her. Student does not draw a picture that represents his/her writing about agriculture.

Performance Assessment:

Students will make a poster to display in the school, informing the school about Pennsylvania agriculture. Students will identify one thing that is produced or grown in Pennsylvania, informing other students about how it was made, where they might find it, and details on how it was produced.

One example that a student might use is buckwheat, telling what it is, how it used, where it is found, and other information. Each student will need a poster and supplies for decorating the poster. Students will also need resources such as books, articles, and Internet access. Research may be done at home, if you wish.

Performance Assessment Scoring Rubric:

Points	Description
5	The student completes all five of the requirements: identifies something that is grown or produced in Pennsylvania. identifies where it is grown or produced and for what it is used. identifies how the product is used. identifies why the product is important to people and to Pennsylvania. decorates a poster and displays information that is easy to read.
4	The student completes four of the requirements.
3	The student completes three of the requirements.
2	The student completes two of the requirements.
1	The student completes one of the requirements.
0	The student demonstrates lack of understanding or does not attempt to complete the assessment.



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Comments

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